#4

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/517,309
Source: PCT
Date Processed by STIC: 10/28/2005

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RAW SEQUENCE LISTING DATE: 10/28/2005
PATENT APPLICATION: **US/10/517,309** TIME: 10:15:42

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  3 <110> APPLICANT: MIRAS, STEPHANE
  4       SALVI, DANIEL
  5       ROLLAND, NORBERT
  6       JOYARD, JACQUES
  7       FERRO, MYRIAM
  8       GARIN, JEROME
  9       GRUNWALD, DIDIER
 11 <120> TITLE OF INVENTION: PLASTIDAL TARGETING PEPTIDE
 13 <130> FILE REFERENCE: 263270USPCT
 15 <140> CURRENT APPLICATION NUMBER: 10/517,309
C--> 16 <141> CURRENT FILING DATE: 2004-12-17
 18 <150> PRIOR APPLICATION NUMBER: PCT/FR03/01877
 19 <151> PRIOR FILING DATE: 2003-06-19
 21 <150> PRIOR APPLICATION NUMBER: FR02/07729
 22 <151> PRIOR FILING DATE: 2002-06-21
 24 <160> NUMBER OF SEQ ID NOS: 18
 26 <170> SOFTWARE: PatentIn version 3.3
 28 <210> SEQ ID NO: 1
 29 <211> LENGTH: 329
 30 <212> TYPE: PRT
 31 <213> ORGANISM: Arabidopsis thaliana
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 40             20                  25                  30
 43 Ser Asn Glu Val Cys Leu Lys Leu Glu Ala Thr Ser Leu Asn Pro Val
 44         35                  40                  45
 47 Asp Trp Lys Ile Gln Lys Gly Met Ile Arg Pro Phe Leu Pro Arg Lys
 48     50                  55                  60
 51 Phe Pro Cys Ile Pro Ala Thr Asp Val Ala Gly Glu Val Val Glu Val
 52 65                  70                  75                  80
 55 Gly Ser Gly Val Lys Asn Phe Lys Ala Gly Asp Lys Val Val Ala Val
 56                 85                  90                  95
 59 Leu Ser His Leu Gly Gly Gly Gly Leu Ala Glu Phe Ala Val Ala Thr
 60             100                 105                 110
 63 Glu Lys Leu Thr Val Lys Arg Pro Gln Glu Val Gly Ala Ala Glu Ala
 64         115                 120                 125
 67 Ala Ala Leu Pro Val Ala Gly Leu Thr Ala Leu Gln Ala Leu Thr Asn
 68     130                 135                 140
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 72 145                 150                 155                 160
 75 Val Thr Ala Ala Ser Gly Gly Val Gly His Tyr Ala Val Gln Leu Ala
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76                 165                 170                 175
79 Lys Leu Ala Asn Ala His Val Thr Ala Thr Cys Gly Ala Arg Asn Ile
80             180                 185                 190
83 Glu Phe Val Lys Ser Leu Gly Ala Asp Glu Val Leu Asp Tyr Lys Thr
84         195                 200                 205
87 Pro Glu Gly Ala Ala Leu Lys Ser Pro Ser Gly Lys Lys Tyr Asp Ala
88     210                 215                 220
91 Val Val His Cys Ala Asn Gly Ile Pro Phe Ser Val Phe Glu Pro Asn
92 225                 230                 235                 240
95 Leu Ser Glu Asn Gly Lys Val Ile Asp Ile Thr Pro Gly Pro Asn Ala
96                 245                 250                 255
99 Met Trp Thr Tyr Ala Val Lys Lys Ile Thr Met Ser Lys Lys Gln Leu
100            260                 265                 270
103 Val Pro Leu Leu Leu Ile Pro Lys Ala Glu Asn Leu Glu Phe Met Val
104        275                 280                 285
107 Asn Leu Val Lys Glu Gly Lys Val Lys Thr Val Ile Asp Ser Lys His
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116                 325
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120 <211> LENGTH: 960
121 <212> TYPE: DNA
122 <213> ORGANISM: Spinacia oleracea
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129 ttcaatattc tggctatggt ggtggaactg atgctttaaa gcatgttgaa gttgctgttc    180
131 ctgatccaaa gtctgatgag ttattgctta aaattgaggc tgcaactttg aacccaattg    240
133 attggaagat tcagaagggt gtacttcgtc ccctcttacc ccgcaagttc cctactatac    300
135 ctggaactga tgttgctggg gaggtagtcc aggctggatc tgctgtaaat aggtttaaaa    360
137 ctggtgacaa agtcgtggcc gtgcttagtc atgctactgg gggtgcacta gctgaatatg    420
139 ccgtggcgaa ggagaacctg acagttgcta gaccaccaga agtatcagca gcagaaggtg    480
141 ctgccttacc tgttgctgcc ctcacggctc accaagctct cacccagttt gccaacatca    540
143 agctcgatgg aagtggtgaa aggaagaaca tattgatcac ggctgcatca gggggtgtgg    600
145 gccactatgc ggtccagctg gcaaagctcg ggaacacgca tgtaacagca acatgtggag    660
147 cccgcaacct agatttcgtg aaaggcttgg gtgccgatga ggttcttgac tacaaaacac    720
149 ctgaaggggc gtccttgaca agcccgtcag gaaagaaata tgactacgta gtccacggtg    780
151 caagcggaat cccttggtcc acctttgagc ccaatttgag tgaagcaggt aaggtaatag    840
153 atttgactcc tggcccaact gcaatgatga catttgcttg gaaaaagcta acattctcca    900
155 aaaagcagct ggtgcctctg cttttgatac caaagatccc caactttgaa tatgttgtga    960
158 <210> SEQ ID NO: 3
159 <211> LENGTH: 329
160 <212> TYPE: PRT
161 <213> ORGANISM: Spinacia oleracea
163 <400> SEQUENCE: 3
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166 1               5                  10                  15
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170             20                  25                  30
173 Ser Asp Glu Leu Leu Leu Lys Ile Glu Ala Ala Thr Leu Asn Pro Ile
174         35                  40                  45
177 Asp Trp Lys Ile Gln Lys Gly Val Leu Arg Pro Leu Leu Pro Arg Lys
178     50                  55                  60
181 Phe Pro Thr Ile Pro Gly Thr Asp Val Ala Gly Glu Val Val Gln Ala
182 65                  70                  75                  80
185 Gly Ser Ala Val Asn Arg Phe Lys Thr Gly Asp Lys Val Val Ala Val
186                 85                  90                  95
189 Leu Ser His Ala Thr Gly Gly Ala Leu Ala Glu Tyr Ala Val Ala Lys
190             100                 105                 110
193 Glu Asn Leu Thr Val Ala Arg Pro Pro Glu Val Ser Ala Ala Glu Gly
194         115                 120                 125
197 Ala Ala Leu Pro Val Ala Ala Leu Thr Ala His Gln Ala Leu Thr Gln
198     130                 135                 140
201 Phe Ala Asn Ile Lys Leu Asp Gly Ser Gly Glu Arg Lys Asn Ile Leu
202 145                 150                 155                 160
205 Ile Thr Ala Ala Ser Gly Gly Val Gly His Tyr Ala Val Gln Leu Ala
206                 165                 170                 175
209 Lys Leu Gly Asn Thr His Val Thr Ala Thr Cys Gly Ala Arg Asn Leu
210             180                 185                 190
213 Asp Phe Val Lys Gly Leu Gly Ala Asp Glu Val Leu Asp Tyr Lys Thr
214         195                 200                 205
217 Pro Glu Gly Ala Ser Leu Thr Ser Pro Ser Gly Lys Lys Tyr Asp Tyr
218     210                 215                 220
221 Val Val His Gly Ala Ser Gly Ile Pro Trp Ser Thr Phe Glu Pro Asn
222 225                 230                 235                 240
225 Leu Ser Glu Ala Gly Lys Val Ile Asp Leu Thr Pro Gly Pro Thr Ala
226                 245                 250                 255
229 Met Met Thr Phe Ala Trp Lys Lys Leu Thr Phe Ser Lys Lys Gln Leu
230             260                 265                 270
233 Val Pro Leu Leu Leu Ile Pro Lys Ile Pro Asn Phe Glu Tyr Val Val
234         275                 280                 285
237 Asn Leu Val Lys Glu Lys Lys Leu Lys Thr Val Ile Asp Ser Lys His
238     290                 295                 300
241 Pro Leu Ser Lys Gly Glu Asp Ala Trp Ser Arg Ile Met Gly Gly His
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246                 325
249 <210> SEQ ID NO: 4
250 <211> LENGTH: 61
251 <212> TYPE: PRT
252 <213> ORGANISM: Arabidopsis thaliana
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260 Met Ile Arg Pro Phe Leu Pro Arg Lys Phe Pro Cys Ile Pro Ala Thr
261             20                  25                  30
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264 Asp Val Ala Gly Glu Val Val Glu Val Gly Ser Gly Val Lys Asn Phe
265         35                  40                  45
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269     50                  55                  60
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273 <211> LENGTH: 61
274 <212> TYPE: PRT
275 <213> ORGANISM: Spinacia oleracea
277 <400> SEQUENCE: 5
279 Ile Glu Ala Ala Thr Leu Asn Pro Ile Asp Trp Lys Ile Gln Lys Gly
280 1               5                   10                  15
283 Val Leu Arg Pro Leu Leu Pro Arg Lys Phe Pro Thr Ile Pro Gly Thr
284             20                  25                  30
287 Asp Val Ala Gly Glu Val Val Gln Ala Gly Ser Ala Val Asn Arg Phe
288         35                  40                  45
291 Lys Thr Gly Asp Lys Val Val Ala Val Leu Ser His Ala
292     50                  55                  60
295 <210> SEQ ID NO: 6
296 <211> LENGTH: 288
297 <212> TYPE: PRT
298 <213> ORGANISM: Escherichia coli
300 <400> SEQUENCE: 6
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306 Gln Ala Val Glu Phe Thr Pro Ala Asp Pro Ala Glu Asn Glu Ile Gln
307             20                  25                  30
310 Val Glu Asn Lys Ala Ile Gly Ile Asn Phe Ile Asp Thr Tyr Ile Arg
311         35                  40                  45
314 Ser Gly Leu Tyr Pro Pro Pro Ser Leu Pro Ser Gly Leu Gly Thr Glu
315     50                  55                  60
318 Ala Ala Gly Ile Val Ser Lys Val Gly Ser Gly Val Lys His Ile Lys
319 65                  70                  75                  80
322 Ala Gly Asp Arg Val Val Tyr Ala Gln Ser Ala Leu Gly Ala Tyr Ser
323                 85                  90                  95
326 Ser Val His Asn Ile Ile Ala Asp Lys Ala Ala Ile Leu Pro Ala Ala
327             100                 105                 110
330 Ile Ser Phe Glu Gln Ala Ala Ala Ser Phe Leu Lys Gly Leu Thr Val
331         115                 120                 125
334 Tyr Tyr Leu Leu Arg Lys Thr Tyr Glu Ile Lys Pro Asp Glu Gln Phe
335     130                 135                 140
338 Leu Phe His Ala Ala Ala Gly Gly Val Gly Leu Ile Ala Cys Gln Trp
339 145                 150                 155                 160
342 Ala Lys Ala Leu Gly Ala Lys Leu Ile Gly Thr Val Gly Thr Ala Gln
343                 165                 170                 175
346 Lys Ala Gln Ser Ala Leu Lys Ala Gly Ala Trp Gln Val Ile Asn Tyr
347             180                 185                 190
350 Arg Glu Glu Asp Leu Val Glu Arg Leu Lys Glu Ile Thr Gly Gly Lys
351         195                 200                 205
354 Lys Val Arg Val Val Tyr Asp Ser Val Gly Arg Asp Thr Trp Glu Arg
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Input Set : D:\263270US.txt
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355     210                 215                 220
358 Ser Leu Asp Cys Leu Gln Arg Arg Gly Leu Met Val Ser Phe Gly Asn
359 225                 230                 235                 240
362 Ser Ser Gly Ala Val Thr Gly Val Asn Leu Gly Ile Leu Asn Gln Lys
363                 245                 250                 255
366 Gly Ser Leu Tyr Val Thr Arg Pro Ser Leu Gln Gly Tyr Ile Thr Thr
367             260                 265                 270
370 Arg Glu Glu Leu Thr Glu Ala Ser Asn Glu Leu Phe Ser Leu Ile Ala
371         275                 280                 285
374 <210> SEQ ID NO: 7
375 <211> LENGTH: 334
376 <212> TYPE: PRT
377 <213> ORGANISM: Saccharomyces cerevisiae
379 <400> SEQUENCE: 7
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386             20                  25                  30
389 Ile Ser Glu Glu Glu Leu Leu Ile Lys Asn Lys Tyr Thr Gly Val Asn
390         35                  40                  45
393 Tyr Ile Glu Ser Tyr Phe Arg Lys Gly Ile Tyr Pro Cys Glu Lys Pro
394     50                  55                  60
397 Tyr Val Leu Gly Arg Glu Ala Ser Gly Thr Val Val Ala Lys Gly Lys
398 65                  70                  75                  80
401 Gly Val Thr Asn Phe Glu Val Gly Asp Gln Val Ala Tyr Ile Ser Asn
402                 85                  90                  95
405 Ser Thr Phe Ala Gln Tyr Ser Lys Ile Ser Ser Gln Gly Pro Val Met
406             100                 105                 110
409 Lys Leu Pro Lys Gly Thr Ser Asp Glu Glu Leu Lys Leu Tyr Ala Ala
410         115                 120                 125
413 Gly Leu Leu Gln Val Leu Thr Ala Leu Ser Phe Thr Asn Glu Ala Tyr
414     130                 135                 140
417 His Val Lys Lys Gly Asp Tyr Val Leu Leu Phe Ala Ala Ala Gly Gly
418 145                 150                 155                 160
421 Val Gly Leu Ile Leu Asn Gln Leu Leu Lys Met Lys Gly Ala His Thr
422                 165                 170                 175
425 Ile Ala Val Ala Ser Thr Asp Glu Lys Leu Lys Ile Ala Lys Glu Tyr
426             180                 185                 190
429 Gly Ala Glu Tyr Leu Ile Asn Ala Ser Lys Glu Asp Ile Leu Arg Gln
430         195                 200                 205
433 Val Leu Lys Phe Thr Asn Gly Lys Gly Val Asp Ala Ser Phe Asp Ser
434     210                 215                 220
437 Val Gly Lys Asp Thr Phe Glu Ile Ser Leu Ala Ala Leu Lys Arg Lys
438 225                 230                 235                 240
441 Gly Val Phe Val Ser Phe Gly Asn Ala Ser Gly Leu Ile Pro Pro Phe
442                 245                 250                 255
445 Ser Ile Thr Arg Leu Ser Pro Lys Asn Ile Thr Leu Val Arg Pro Gln
446             260                 265                 270
449 Leu Tyr Gly Tyr Ile Ala Asp Pro Glu Glu Trp Lys Tyr Tyr Ser Asp
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VERIFICATION SUMMARY DATE: 10/28/2005
PATENT APPLICATION: **US/10/517,309** TIME: 10:15:43

Input Set : **D:\263270US.txt**
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